Public Weather Services

Vision

To satisfy customer and partner requirements for consistent, timely, and accurate weather services, products, forecasts, and warnings.

Concept of Operations

The public weather services program will collaborate with various NOAA offices and other Government agencies, along with private sector organizations and academia, to create new and enhanced weather services. This will be done by improving performance for routine forecasts and for tornado, severe thunderstorm, and winter storm warnings.

Customer and Partner Requirements

- ✓ Improve warning accuracy and lead times.
- ✓ Increase accuracy of forecasts.
- ✓ Distribute severe weather warnings based on subcounty areas.
- ✓ Display information in new formats, including grids, graphics, and Geographic Information System (GIS).
- ✓ Communicate forecast uncertainty using probabilistic techniques.
- ✓ Increase frequency of updates.
- ✓ Implement interactive forecast system where customers can produce user-defined, site-specific forecast information.
- ✓ Distribute computer-readable weather summaries.
- ✓ Generate metropolitan area forecasts for use by commercial, public, TV, radio broadcasters, and emergency managers.
- ✓ Standardize headlines for winter weather and nonprecipitation weather watch/warning/advisory text products.

Link to Science Technology Infusion Plan

Severe weather research and development are directly tied to GPRA performance measures. The Open Systems architecture upgrade to the radar data acquisition platform will begin in FY 2005 and finish in FY 2006.

Product and Service Changes

- Implement a segmented severe weather statement format.
- Implement new convective watch product suite.
- Discontinue legacy convective watch product suite.
- Deploy interactive user-defined, site-specific forecast.

GPRA Performance Measures

GPRA Goal	1998 - 2002 Baseline	FY 2003 Goal	FY 2004 Goal	FY 2005 Goal
Tornado Warning, Accuracy	69%	72%	72%	73%
Tornado Warning, Lead Time	11 minutes	12 minutes	12 minutes	13 minutes
Tornado Warning, False Alarm Ratio	75%	72%	70%	73%

GPRA Goal	1998 - 2002 Baseline	FY 2003 Goal	FY 2004 Goal	FY 2005 Goal
Winter Storm Warning, Lead Time	12 hours	13 hours	14 hours	15 hours
Winter Storm Warning, Accuracy	88%	88%	89%	90%

Science and Technology Requirements

- Plan transition to Weather Research and Forecast (WRF) model.
- Implement model upgrades, including changes to Short-Range Ensemble Forecasts (SREF) and Medium-Range Ensemble Forecasts (MREF).
- Improve assimilation and subgrid-scale orographic forcing schemes in mesoscale and global forecast systems.

Milestones by Quarter

1st Quarter

- Develop plan for a new GPRA measure based on American Customer Satisfaction Index (ACSI) results.
- Present public weather service update briefing at NWA annual meeting.
- Establish national standard for interactive forecast services.
- Develop operational requirements for Next Generation Warning Tool.
- Implement a segmented severe weather statement format.
- Implement headline standardization in winter weather and nonprecipitation weather watch/warning/advisory text products.

2nd Quarter

- Implement VTEC in public weather watch, warning, and advisory text products.
- Conduct 4th annual Severe Weather Program Manager's meeting.
- Implement trial program at designated WFOs to issue winter weather warnings and advisories based on local impact and quantitative threshold criteria.
- Develop polygon-based warnings program plan.
- Implement new convective watch product suite.
- Discontinue legacy convective watch product suite.
- Present public weather service update briefing at NWS Partners Workshop.

3rd Quarter

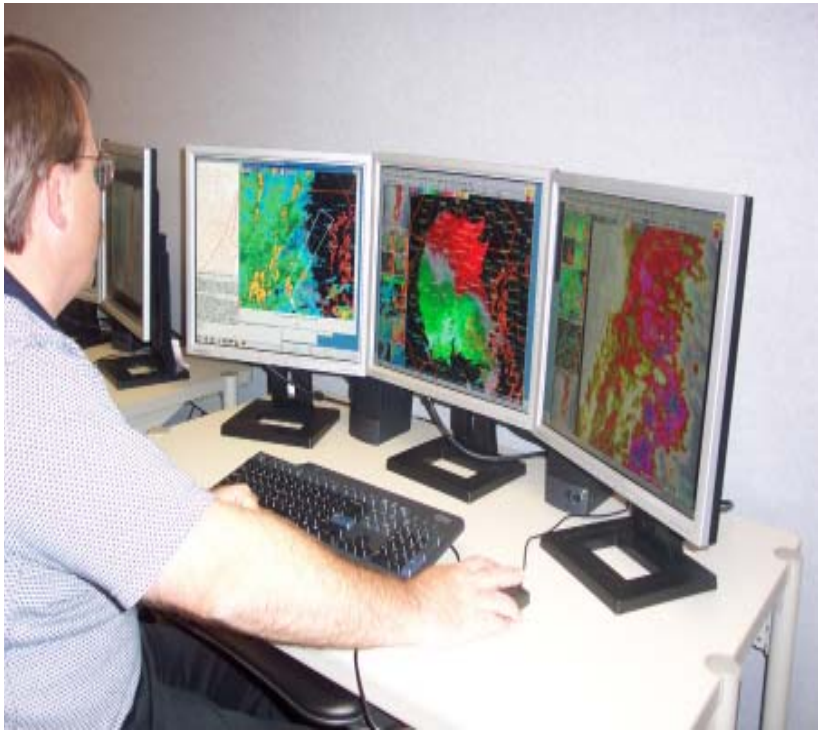
- Conduct 4th annual Public Weather Program Manager's meeting.
- Present public weather service update briefing at AMS Broadcaster's Conference.

4th Quarter

- Develop Metropolitan Area Forecasts.
- Improve assessment of Winter Weather Program.
- Establish national standard for COOP observations.
- Establish national standard for sub-Local Storm Reports (LSRs).
- Include quantitative precipitation forecast in text-based products.
- Develop 7-day "stats-on-demand" for point forecast matrix elements.

Integrated Requirements

- ✓ Produce baseline product formatters for products specified in NWS Instruction 10-503.
- ✓ Develop system for Convective Analysis and Nowcasting.



NOAA Meteorologist prepares a warning based on radar and satellite imagery displayed on an AWIPS workstation.

Outreach

- ✓ Presentations on Watch by County and Short Duration Warning Quality Control at NWA and AMS conventions and at the annual National Severe Weather Workshop.
- ✓ Present public weather service update briefings at NWA, AMS, Broadcasters Conference, and International Association of Emergency Managers (IAEM) annual meetings.
- ✓ Lead the Severe Weather Program Leader's Meeting, prior to the National Severe Weather Workshop.

Verification

- ✓ Develop and implement verification for winter weather watches and event-specific winter weather warnings.
- ✓ Begin verification development of other forecast elements, including cloud amount, snow amount, wind speed and direction, and precipitation type.
- ✓ Start development of polygon verification for severe thunderstorms and tornadoes.

Regional Initiatives

Alaska

- ✓ Host and report on a post-season winter weather workshop.
- ✓ Increase understanding of extreme events through local studies and post-event analysis.
- ✓ Expand use of all-season spotter networks.

Contact Information

Branch Chief, Fire and Public Weather Services Branch, 301-713-1867, ext. 100.